AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) A high-density recording medium, comprising:

a lead-in area including a control information required for recording or reproducing data on or from the recording medium; and

a burst cutting area located at an inner area other than the lead-in area, the burst cutting area including a plurality of data units; ~~and~~

~~a data area including an address unit,~~

wherein additional information is ~~recorded on~~ included in at least one ~~of the burst cutting area and the address~~ data unit, ~~while~~ the additional information ~~being used to control a recording or reproduction of the recording medium~~ including at least a medium type information.

2. (Currently Amended) The high-density recording medium according to claim 1, wherein the medium type information indicates that the recording medium is ~~a BD-RE (Blu-ray Disc Rewritable) or a BD-ROM~~ a writable medium or read-only medium.

3. (Currently Amended) The high-density recording medium according to claim 1, wherein ~~the additional information is recorded in a particular information field included in a data unit of the burst cutting area~~ each data unit is preceded by synch information.

4. (Currently Amended) The high-density recording medium according to claim 3, wherein the ~~particular~~ additional information ~~field~~ is recorded in a first ~~information field included in the~~ data unit.

5. (Currently Amended) The high-density recording medium according to claim 1, wherein the additional information is repeatedly recorded ~~in information fields included~~ in ~~a~~ each data unit ~~of the burst cutting area~~.

6. (Currently Amended) The high-density recording medium according to claim 1, wherein the control information in said lead-in area includes the additional information ~~is recorded in a particular address field included in an address unit of a predetermined size~~ in the burst cutting area.

7. (Currently Amended) The high-density recording medium according to claim 6, ~~wherein~~ further comprising:

~~the address unit has a size of 16 addresses x 9 rows (bytes), and the particular address field is a 1-byte address field included in the address unit while corresponding to a row number of '4' and an address number of 'S' ($AF_{4,S}$ (S = 0, 1,..., 15))~~ a lead-out area having the control information.

8. (Currently Amended) The high-density recording medium according to claim 1, wherein the additional information ~~recorded in the burst cutting area~~ further includes ~~at least one of medium reflectivity information, medium~~ layer information~~, medium type information, and application indicator information~~.

9. (Currently Amended) The high-density recording medium according to claim 8, wherein the additional information ~~is identified without requiring any separate decoding operation~~ further includes a sequence number to identify a data unit.

10. (Currently Amended) The high-density recording medium according to claim 8, wherein the ~~medium~~ layer information represents the number of layers included in the recording medium.

11. (Currently Amended) The high-density recording medium according to claim ~~1~~ 10, wherein the control information in said lead-in area includes the additional information ~~recorded in the address unit includes at least one of medium reflectivity information, zone type information, data type information, medium type information, and layer information~~ in the burst cutting area.

12. (Currently Amended) The high-density recording medium according to claim ~~11~~ 9, wherein the ~~zone type~~ additional information ~~represents a current position when a data recording or reproducing operation is carried out, the current position corresponding to a data zone, an inner zone, or an outer zone~~ further includes an application indicator to indicate a use for a copy protection system.

13. (Currently Amended) The high-density recording medium according to claim ~~11~~ 1, wherein the ~~data type~~ additional information ~~represents the type of associated data, the associated data being read-only data, recordable data or rewritable data~~ further includes a reflectivity information, the reflectivity information indicating the reflectivity of the recording medium.

14. (Currently Amended) The high-density recording medium according to claim ~~8~~ 13, wherein the ~~medium~~ reflectivity information is required for an optical power control ~~and~~ or an automatic gain control when a data recording or reproducing operation is carried out.

15. (Currently Amended) The high-density recording medium according to claim ~~8~~ 1, wherein the medium type information represents the type of ~~an optical disc, the optical disc being~~ a BD-ROM (BD-Read Only memory), a BD-R (BD-Recordable), or BD-RE (~~Blu-ray Disc~~ BD-Rewritable).

16. (Currently Amended) The high-density recording medium according to claim ~~11~~ 1, wherein the ~~layer information is information representing the number of layers included in the recording medium or information defining a current layer of the recording medium~~ data unit comprises a plurality of information bytes, the medium type information is included in at least one information byte.

17. (Currently Amended) The high-density recording medium according to claim ~~1~~ 16, wherein the ~~additional~~ medium type information is ~~recorded~~ included in ~~addition to management data located at a leading portion of a data area on the recording medium~~ the first information byte in each data unit.

18. (Currently Amended) A ~~recording/reproducing~~ method for recording or reproducing data on or from a high-density ~~optical disc~~ recording medium, comprising the steps of:

identifying information ~~recorded in a particular information field~~ included in ~~a~~ at

least one data unit ~~read from~~ of a burst cutting area of the ~~optical disc or in a particular address field included in an address unit read from the optical disc~~ recording medium, the information including at least a medium type information; and

controlling a data recording or reproducing operation, based on the identified information.

19. (Currently Amended) The ~~recording/reproducing~~ method according to claim 18, wherein the ~~particular~~ information ~~field is recorded with at least one of disc reflectivity information, disc~~ further includes layer information~~, disc type information, and application indicator information~~ to indicate the number of layers included in the recording medium, thereby identifying the number of layers of the recording medium.

20. (Currently Amended) The ~~recording/reproducing~~ method according to claim 18, wherein the ~~particular address field is recorded with at least one of disc reflectivity information, zone type information, data type information, disc type information, and layer information~~ burst cutting area includes a plurality of data units, the information included in at least one data unit, wherein the identifying step identifies the information by processing the data unit.

21. (Currently Amended) The ~~recording/reproducing~~ method according to claim ~~19~~ 20, wherein the ~~disc layer~~ information ~~represents the number of layers included in the optical disc~~ is repeatedly included in each data unit.

22. (Currently Amended) The ~~recording/reproducing~~ method according to claim ~~19~~ 18, wherein the ~~disc~~ medium type information represents the type of ~~the optical disc, the~~

~~optical disc being~~ a BD-ROM (BD-Read Only memory), a BD-R (BD-Recordable), or a BD-RE (~~Blu-ray Disc~~ BD-Rewritable).

23. (Currently Amended) The ~~recording/reproducing~~ method according to claim ~~19~~ 18, wherein the ~~disc reflectivity information is required for an optical power control and an automatic gain control when the data recording or reproducing operation is carried out~~ information includes a reflectivity information of the recording medium, thereby controlling an optical power or an automatic gain for a recording or reproducing operation.

24. (Currently Amended) The ~~recording/reproducing~~ method according to claim 18, wherein the identifying step identifies the information ~~recorded in the particular information field is~~ preferentially ~~read~~ when the ~~optical disc~~ recording medium is loaded in ~~an optical disc~~ a recording or reproducing apparatus.

25. (Currently Amended) The ~~recording/reproducing~~ method according to claim 18, wherein the identifying step identifies the information ~~recorded in the particular address field is read during the data recording or reproducing operation~~ in an early stage of recording or reproducing data on or from the recording medium.

26. Cancelled

27. Cancelled

28. Cancelled

29. Cancelled

30. Cancelled

31. Cancelled

32. Cancelled

33. Cancelled

34. Cancelled

Please add the following new claims:

35. (New) The method according to claim 18, wherein the information includes a sequence number to identify a data unit, thereby identifying the data unit that includes the information.

36. (New) The method according to claim 18, wherein the recording medium further comprises a lead-in area that includes information equal to the information of the burst cutting area followed by the lead-in area, the method further comprising,

moving an optical pickup to read the information recorded on the burst cutting area, and then identifying the information in the burst cutting area.

37. (New) The method according to claim 18, wherein the identifying step identifies the information at an early stage of a drive start-up procedure.

38. (New) A method for recording or reproducing data on or from a high-density recording medium, comprising the steps of:

reading information included in a burst cutting area of the recording medium, the burst cutting area located at an inner area other than a lead-in area, and including a plurality of data units, the information included in at least one data unit and including at least a medium type information; and

controlling a data recording or reproducing operation, based on the read information.

39. (New) The method according to claim 38, wherein each data unit comprises a plurality of information bytes, the information included in at least one information byte of the data unit.

40. (New) The method according to claim 38, wherein the information further includes layer information to indicate the number of layers included in the recording medium, thereby identifying the number of layers of the recording medium.

41. (New) The method according to claim 40, further comprising:

processing the read information included in at least one data unit to identify the information.

42. (New) The method according to claim 41, wherein the information is repeatedly included in each data unit, wherein the processing step processes the read information included in each data unit to identify the information.

43. (New) The method according to claim 38, wherein the medium type information represents the type of a BD-ROM (BD-Read Only memory), a BD-R (BD-Recordable), or a BD-RE (BD-Rewritable).

44. (New) The method according to claim 38, wherein the information includes a reflectivity information of the recording medium, thereby controlling an optical power or an automatic gain for a recording or reproducing operation.

45. (New) The method according to claim 38, wherein the information includes a sequence number to identify a data unit, thereby identifying the data unit that includes the information.

46. (New) The method according to claim 38, wherein the reading step reads the information preferentially when the recording medium is loaded in a recording or reproducing apparatus.

47. (New) The method according to claim 38, wherein the reading step reads the information in early stage for recording or reproducing data on or from the recording medium.

48. (New) The method according to claim 38, wherein the reading step reads the information at early stage of drive start-up procedure.

49. (New) The method according to claim 38, wherein the lead-in area includes information equal to the information of the burst cutting area, the method further comprising,

moving an optical pickup to first read the information recorded on the burst cutting area.